DOCUMENT RESUME

ED 240 827 FL 013 975

AUTHOR Angelis, Paul J.
TITLE Academic Needs and Priorities for Testing.
PUB DATE 82
NOTE 17p.
PUB TYPE Viewpoints (120) -- Journal Articles (080)
JOURNAL CIT American Language Journal; v1 n1 p41-56 Fall 1982

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Business Administration Education; Engineering Education; *English (Second Language); *Foreign Students; Graduate Students; *Language Proficiency; Language Skills; *Language Tests; *Research Needs; Second Language Instruction; Student Attitudes; Student Needs; Surveys; *Teacher Attitudes; Testing

ABSTRACT

Issues arising from the need to develop better English proficiency testing for foreign students are discussed, considering three distinct groups of interested people: (1) the students; (2) decisionmakers responsible for the students' admission throughout the institution, including all faculty; and (3) field specialists, including teachers of English as a second language, linguists, and language teaching and testing researchers. A segment of a study that examined business and engineering graduate students' language difficulties and faculty perceptions of the students' language deficiencies and language skill needs in pursuing academic study is summarized. Priorities for testing are outlined, including: greater knowledge of student characteristics and the role of English in their daily lives; support for research that can be translated into terms useful for administrators; improved linkage between administrators and field specialists; evaluation of the tests now used, from linguistic, psychometric, and practical perspectives; and improved dialogue between teaching and testing specialists. (MSE)

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THE AMERICAN LANGUAGE JOURNAL
vol I no 1 Fall 1982

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# *Academic Needs and Priorities for Testing*

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As a person who has listened to many presentations on language testing, I have usually found that speakers tend to approach the subject in one of two ways. The first of these usually finds the speakers devoting most of their remarks to a detailed discussion of the latest results of some recent research. Whether this research has been conducted to analyze the nature of some existing tests or to explore the use of some new measures, such presentations usually come complete with a heavy dose of statistical data couched in rather mystical jargon designed to confirm the authenticity of whatever conclusions are made. The second type of presentation usually centers around a series of rather general observations of current practices in language testing. Here speakers tend to avoid statistical data but concentrate on a litany of major and minor themes from linguistic, psychological, or cultural perspectives. Both types of presentations tend to be critical of language testing as we know it and to leave the audience with a rather pessimistic view of where we stand and of where we are headed. Furthermore, I find that audiences leave both types of presentations justifiably confused. In the first instance, the barrage of numerical data confirms their suspicions that language testing really has nothing to do with language at all, since they as native speakers could not understand a word of what was said. In the second case, there is an air of relevance since at least the discussion touches on students, test use and current practices. But the confusion arises from being left with the feeling that nothing is right with the world and that if we are to correct any of the present injustices we must clear the slate and begin anew. There is nothing more perplexing than knowing that a problem exists but that it is so complex there is little hope of determining where to begin.

These descriptions obviously portray extreme cases,

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and given the audience and the specific topic, even these two types of presentations may be appropriate. In my own work in language testing and at times when I have occasion to speak on the subject, I have tried to steer a middle course. Research, yes, even very detailed, quantitative research, cannot be divorced from language testing since it is by its very nature a field which depends on both linguistic and psychometric foundations. However, the research conducted and, even more importantly, the results of that research, must be couched within a framework that is meaningful to all of the parties concerned. The alternative is rejection of potentially useful information. From an opposite perspective, discussions and investigations of testing which restrict themselves to language issues alone, be they broadly or narrowly defined, ignore a vital element of the field and run the risk of raising important issues but at the same time alienating those who may be able to contribute to a clarification of those issues. It is from this point of view that I would like to make a few remarks on the subject of academic needs and priorities for testing. First, I must set some limitations on the scope of my remarks. In testing as well as teaching we must be clear about who and what we are discussing. There are some obvious differences in approaches we adopt depending on the nature of the students and the programs involved. Therefore, although there may be some broad applications for much of what I may say, I aim to address myself to English testing in post-secondary academic programs. Secondly, within the many types of testing I will look principally at the question of proficiency testing in English as a second or foreign language. And lastly, since even here there can be a number of directions for potential discussion, I prefer to focus on such testing within the context of the situation presented by non-native speakers of English who enter academic programs of study conducted via English-medium instruction and in an overall English-speaking environment,

chiefly here in the United States.

Lest you be tempted to conclude that these increasing limitations on the subject I address have been made in the interest of simplification, may I hasten to assure you that even this subject is an extremely complex one. As with many other areas in our field, we can say without hesitation that the more we learn the more we find there is to learn. The basic stance from which I view this subject has developed from my collective experiences as a language teacher, teacher trainer, test developer, test user, and most especially coordinator of research. What has contributed the most in this latter regard is the time I spent in Educational Testing Service as coordinator of research for the TOEFL program. Thus, much of what I shall say on this subject can best be explained by referring to some of the research proposed, conducted and evaluated as part of the TOEFL research program. I do so not in an attempt to justify the use of any particular test but to put forward an agenda which can serve as a framework for a discussion of any testing carried out in this context.

Perhaps the most important starting point is the realization that what we are discussing is the focal point of a number of key issues which can best be described in terms of the people representing those issues. When we begin to discuss the testing of English for academic purposes we cannot or should not fail to include three groups, each of which can be further subdivided into two subgroups. The first are the students who take the tests. And here I would subdivide them into those students who enter academic programs directly from overseas and those who do so via English training programs in this country. The second group can most adequately be given the name administrators. I choose that term with hesitation because of its occasional negative connotations, but I use it to refer to two subgroups. The first are those persons who take part in the decision-making process

for the admission of foreign students throughout the university. These include admissions officers, graduate deans and at least on an *ad hoc* basis any other university officials who from time to time contribute to policies and guidelines established for admission. The second subgroup are faculty members. At the graduate level, faculty members, too, are often part of the decision-making team by establishing policies for admission to their own programs. However, from a broader perspective, all faculty members are an integral part of this second component because of their vital link with students during the course of their academic study. The third group I shall refer to as field specialists. Here I include two subgroups, as well. The first are the ESL teachers and linguists (at least those linguists who concern themselves with ESL teaching and language acquisition). The second are researchers of two persuasions: those involved with research in language teaching and learning and those involved with research in language testing, be they specialists in either language or testing.

Given each of these three groups with their dual memberships, the ideal towards which we should aim would be the development and use of English proficiency tests which are sensitive to the various skills exhibited by prospective students, meaningful to those who set the guidelines for the admission of foreign students and who deal with them within their programs, and accurate for those who prepare students to use English or who investigate the relevant research issues from either language or measurement perspectives. We are obviously far from achieving such an ideal, but if we can keep all three groups in mind in whatever role we play as participant or observer, our chances of keeping to the straight and narrow path, avoiding harmful digressions, will be vastly improved. Let us look at each of the three groups for a moment to ascertain their roles in this scenario. Students are included since without test takers there would be no tests. I have chosen to distinguish between those students who enter academic programs via English language

programs and those who enter from overseas because I feel that they represent two different situations. The two cases differ mostly due to access to information. In neither case should we be satisfied with making evaluations of language proficiency on the basis of a single measure.

However, for students who are still overseas, often thousands of miles away from their intended institutions, such a situation is difficult to avoid. On the other hand, when students have been here for some time and have participated in English training programs, we do have access to important, relevant information which should help to give us a profile of their language abilities. I am speaking here of diagnostic information such as strengths and weaknesses in particular skills, rate of learning and motivation. These are messy issues, for sure, and no clear-cut way exists to classify adequately such distinguishing characteristics. But as we develop the ability to both define and describe such factors as these, we should not hesitate to carry over these abilities to the sphere of testing. In actual practice, it has been my experience that some attempts are usually made to seek such information for students coming from domestic English training programs. What is lacking has generally been consistency, coordination and adequacy of the information sought and/or provided. Between the two groups of students I find the most serious charge coming in reference to those overseas. I have long felt that it is these students who tend to be overlooked when we try to come up with issues to investigate. Furthermore, we lose so much valuable information when we fail to assess the situations presented by the "successful" students. It is still the case that more non-native speakers of English enter academic programs at American institutions of higher education without passing through language training programs here than those who do. Since the largest number of those students enter non-language related fields such as engineering and business, we rarely come in contact with them. We need to make greater efforts to seek out those students and to learn from their experi-

ences how well the English skills they possess match the actual needs for English in their academic programs.

One research project I have dealt with as part of the TOEFL research program has been one in which I attempted to gather some information to describe the tasks confronting foreign students in academic programs. Both the results and progress of this study serve as a means of guiding our current use of tests and point the way to changes which seem appropriate. At the same time, this study has underscored the value of including the second group of persons in our three level team, viz., the administrators. In this study we began with the ultimate objective of being able to provide more accurate, meaningful, information about language skills of test takers to those who receive test scores. It became apparent from the start that a good deal of initial groundwork was necessary if we were ever going to achieve such an objective. Specifically, we needed to determine what skills were actually required in pursuing an academic program of study. The study in question proved to be the first stage in a projected three-phase study to examine the effectiveness of a test such as TOEFL. In practice this first phase has yielded a good deal of information on which to examine the role of this type of testing in general.

The three phases projected were first to determine the skills in question, second to develop direct tests or measures of performance of those skills and third to relate performance on those direct measures to performance on TOEFL. In conducting this first phase, some difficulties readily become apparent. We had decided to rely on two sources of information: faculty members and students themselves. Data from faculty members were to be derived from responses to a questionnaire. Information from students was to come from on-site interviews. Both approaches to data collection were included in the study but only after a number of procedural changes from the original proposal. In an effort to arrive at a meaningful sample of students and institutions it was decided to restrict the study to those fields of study which currently

enroll the largest numbers of foreign students. According to the most recent surveys (Boyan 1981) the two most prominent fields are engineering and business. A further restriction was the decision to limit the study to graduate students rather than undergraduates. The principal factor here was the inability to determine an appropriate source of information for faculty responses. In the case of graduate students, individual departments have access to students enrolled in their programs, usually via the department chairperson or faculty advisors. Moreover, graduate students take most of their coursework and perform related activities within their home departments. Undergraduates have much less contact with faculty in their major departments and, especially during their early stages of study, take a broad range of courses throughout the university. With these restrictions, questionnaires were distributed to business and engineering departments seeking two sets of information. The first elicited faculty ratings of perceived student deficiences. The second sought faculty ratings of both the frequency and importance of a number of designated academic tasks or activities performed by students. Tables 1 through 3 indicate the mean responses for both business and engineering programs. In the case of perceived deficiencies, two trends can be seen. First, faculty members seem to have viewed student deficiencies by contrasting "active" and "passive" skills. Of the twelve items listed in Table 1, those ranked highest in both fields relate to writing, speaking, or using correct grammar and vocabulary. Those ranked lowest include all skills related to reading and understanding lectures or discussions. Such an approach to viewing student deficiencies is reasonable to expect, in that faculty members might ordinarily react more positively or negatively to what they see and hear (student writing and speech) than to what they cannot readily observe (reading and listening). Secondly, a distinction between the two fields appears in the top ranking given by business faculty to student deficiencies in oral skills, at least as represented by their participation in

discussions. This and later responses emphasize the greater demand for oral skills in business than in engineering programs.

In the ratings of activities shown in Table 2, differences can be seen again which are no doubt attributable to the varying nature of the two fields. For example, the low ranking given to laboratory work by business faculty is no doubt an indication of the general absence of such activity in that field. Also, attendance at departmental seminars appears to be a much more frequent and important activity for students of engineering than of business. Conversely, the preparation of case studies was judged more important in business. An examination of additional responses, shown in Table 3, provides some indications of the reading and writing skills most needed in these fields as well as the types of tests and examinations most often included in each field.

In addition to these responses from 160 institutions, information was gathered from interviews with students who had completed one full year of academic study. Because of difficulties in arranging these interviews, only 62 were conducted at 9 different institutions. In both fields, students reported greatest difficulties with speaking. Whether in making presentations to a group or in both formal and informal conversations with professors and fellow students, speaking ability was felt to be the greatest barrier to progressing smoothly through an academic program. Reading deserves special consideration throughout the entire study. During the interviews, students regularly made two points. First, vocabulary, especially technical vocabulary, represented an advantage, since most students were familiar with English terminology used worldwide. This was more the case in engineering than business, largely because graduate students in engineering tend to have previous undergraduate training in the same field. Business students, on the other hand, often enter graduate-level programs with little or no background in business.

What was reported as the largest single drawback in

TABLE 1

Business and Engineering Faculty Mean Ratings of Perceived Graduate Student Deficiencies

| Skills | Engineering | | Business | |
|---|---|---|---|---|
| | Mean | Rank | Mean | Rank |
| 1. Understanding classroom lectures | 2.04 | (9) | 2.06 | (9) |
| 2. Understanding group discussions | 2.36 | (7) | 2.15 | (7) |
| 3. Keeping up with reading assignments | 1.56 | (11) | 1.80 | (11) |
| 4. Reading for factual information | 1.53 | (12) | 1.56 | (12) |
| 5. Drawing inferences and conclusions from written material | 2.35 | (8) | 2.20 | (6) |
| 6. Writing summaries and short reports | 3.03 | (2) | 2.64 | (4) |
| 7. Writing course, term or research reports | 3.13 | (1) | 2.69 | (2) |
| 8. Using technical vocabulary | 1.90 | (10) | 1.98 | (10) |
| 9. Using non-technical vocabulary | 2.51 | (5) | 2.09 | (8) |
| 10. Using correct English grammer | 2.99 | (3) | 2.66 | (3) |
| 11. Answering questions in class | 2.48 | (6) | 2.58 | (5) |
| 12. Participating in discussions | 2.69 | (4) | 2.79 | (1) |

1=not noticeably deficient
2=somewhat deficient
3=deficient
4=very deficient
N's range from 66 to 73 (Engineering) and 83 to 87 (Business)

coping with reading requirements was time. Almost all students reported needing significantly more time than native English speakers in the same programs to keep up with reading assignments. What is noteworthy about this finding is that it contradicts previous evidence from faculty members in which students were judged least deficient in this skill. The explanation appears to lie in the fact that reading takes place primarily outside of the classroom. Instructors, even advisors, are usually aware of the results of the students' reading, i.e., whether or not they can perform adequately on tests or in class. What instructors are not aware of is what the students have gone through to learn the required material.

Table 1

Business and Engineering Faculty Mean Ratings of the Frequency and Importance of Graduate Student Activities

| Frequency | | | | | Importance | | | |
|---|---|---|---|---|---|---|---|---|
| Engineering | | Business | | | Engineering | | Business | |
| Mean | Rank | Mean | Rank | | Mean | Rank | Mean | Rank |
| 3.94 | (1) | 3.85 | (1) | 14. Attend classroom lectures | 3.96 | (1) | 3.84 | (3) |
| 2.83 | (5) | 2.19 | (9) | 15. Attend departmental seminars | 3.09 | (6) | 2.29 | (9) |
| 2.15 | (8) | 2.76 | (6) | 16. Participate in large-group discussions | 2.55 | (8) | 2.78 | (8) |
| 2.13 | (9) | 2.66 | (8) | 17. Make individual oral presentations | 2.99 | (7) | 3.19 | (6) |
| 2.00 | (10) | 2.68 | (7) | 18. Participate in group oral presentations | 2.43 | (9) | 3.04 | (7) |
| 2.96 | (4) | 1.13 | (10) | 19. Conduct laboratory experiments | 3.41 | (5) | 1.13 | (10) |
| 2.17 | (7) | 3.22 | (5) | 20. Prepare case studies | 3.24 | (10) | 3.44 | (5) |
| 3.64 | (3) | 3.50 | (3) | 21. Take examinations | 3.91 | (2) | 3.86 | (2) |
| 3.78 | (2) | 3.83 | (2) | 22. Read assigned material | 3.84 | (3) | 3.90 | (1) |
| 2.76 | (6) | 3.45 | (4) | 23. Write reports | 3.63 | (4) | 3.78 | (4) |

1=very infrequently
2=infrequently
3=frequently
4=very frequently

N's range from 58 to 71 (Engineering) and 63 to 88 (Business)

1=not so important
2=somewhat important
3=important
4=very important

TABLE 3

Business and Engineering Faculty Mean Ratings of the Frequency and Importance of Graduate Student Reading, Writing, and Examination Activities

| Frequency | | | | | Importance | | | |
|---|---|---|---|---|---|---|---|---|
| Engineering | | Business | | Reading Activities | Engineering | | Business | |
| Mean | Rank | Mean | Rank | | Mean | Rank | Mean | Rank |
| 3.80 | (1) | 3.83 | (1) | 25. Assignments from textbooks | 3.83 | (1) | 3.77 | (1) |
| 3.17 | (2) | 3.26 | (3) | 26. Journal articles | 3.49 | (2) | 3.35 | (3) |
| 2.30 | (5) | 3.43 | (2) | 27. Case studies | 2.59 | (5) | 3.60 | (2) |
| 2.96 | (3) | 2.52 | (4) | 28. Technical reports | 3.28 | (3) | 2.54 | (4) |
| 2.85 | (4) | 2.46 | (5) | 29. Abstracts or summaries | 3.11 | (4) | 2.46 | (5) |
| | | | | Writing Activities | | | | |
| 3.65 | (1) | 3.45 | (1) | 31. Tests or examinations | 3.95 | (1) | 3.84 | (1) |
| 2.79 | (3) | 3.15 | (3) | 32. Term papers | 3.44 | (3) | 3.59 | (2) |
| 2.94 | (2) | 2.71 | (4) | 33. Research reports | 3.60 | (2) | 3.09 | (4) |
| 2.00 | (4) | 3.20 | (2) | 34. Case studies | 2.53 | (4) | 3.44 | (3) |
| | | | | Test of Examinations | | | | |
| 2.39 | (3) | 3.63 | (1) | 36. Essay or discussion | 3.00 | (4) | 3.83 | (1) |
| 3.26 | (1) | 2.40 | (3) | 37. Objective | 3.69 | (1) | 3.12 | (2) |
| 2.66 | (2) | 2.67 | (2) | 38. Short answer | 3.15 | (2) | 3.14 | (3) |
| 2.00 | (4) | 1.82 | (4) | 39. Oral | 3.05 | (3) | 2.37 | (4) |

1=very infrequently
2=infrequently
3=frequently
4=very frequently

N's range from 58 to 71 (Engineering) and 77 to 88 (Business)

1=not so important
2=somewhat important
3=important
4=very important

A good deal more could be said about this study, but, despite its findings, it only begins to scratch the surface of what must be the key issue here. We must have a clearer grasp of what it is that students face when entering academic programs. More specifically, we must develop an understanding of the role of English in the performance of required tasks. A number of other studies have been carried out in recent years, most of which relied on data collection from either faculty or students and most of which were conducted within only one institution. The most extensive of these have been those conducted by Johns at San Diego State University (1981), Ostler at the University of Southern California (1980), Wright *et al* at George Washington University (1981) and Lee at the University of Tennessee at Knoxville (1978).

Occasionally, we find that the question of English proficiency enters into investigations of a broader nature, including some focusing on student needs. Such is the case with an extensive study carried out by researchers at Iowa State University under a grant from the Agency for International Development through the National Association for Foreign Student Affairs (Lee, Abd-Ella and Burks, 1981). Among the conclusions cited is the finding that "self-perceived English proficiency is a strong predictor of satisfaction in progress toward achieving both primary and secondary goals as well as in facilitating course work." The report continues, "It is important for foreign students to be confident about their language skills in order to interact with native speakers and compete in an academic program. It is essential then for sponsoring agencies to provide opportunities for their students to participate in intensive English language and pre-academic orientation programs prior to commencing their academic training programs." Such conclusions are not unexpected, but their appearance should alert us to the fact that language issues do arise, even if only as secondary topics, in a wide range of investigations which touch on the question of foreign students in academic programs.

Let us turn for a moment to two other types of research activities which focus on our first group (students) but which at the same time relate directly to the decision-making process carried out by our second group (administrators). Again both come from projects which have been part of the TOEFL research program but could be replicated in a variety of different settings. The first concerns the issue of the comparative performance of non-native speakers of English on a variety of typical standardized tests used in the admissions process. One study (Angelis, Swinton, Cowell, 1979) looked at performance on TOEFL and the verbal portions of the GRE and SAT examinations. A second (Powers, 1980) looked at comparative data for TOEFL and the Graduate Management Admission test (GMAT) including both the verbal and quantitative sections. The results of these studies confirm the strong role English plays in performance on the aptitude tests and provide data to assist in interpreting multiple test scores for non-native speaking applicants for admission. In a related but slightly different study (Alderman, 1982), a similar question was addressed by adding performance in an aptitude test given in the students' native language (Spanish) as a third dimension. Results indicated that as student proficiency in English as a second language improves, the relationship between academic aptitude tested in English as a second language and academic aptitude tested in Spanish as students' first language becomes stronger. No quick formulas have come from these studies which admissions officers can readily apply, but even if the right questions are raised a significant contribution will have been made.

Thus far we have not directed much attention to our third group (field specialists). What is their role in reviewing academic needs and priorities for testing? For the ESL specialists, the needs-assessment studies referred to earlier should be very useful as guides to both teaching and testing. However, other research of a more specialized nature should be of assistance as well. Another study conducted for TOEFL

(Alderman and Holland, 1981) investigated the comparative performance of students from various native language backgrounds on each of the sections of the test. The analyses carried out indicated that there are indeed differences that seem attributable to language background. Not all of these differences proved to be the type that lent themselves to apriori analysis during test development. Furthermore, certain trends in the performance found by the groups in question underscore the fact that cultural, social and other dimensions play a role here along with any linguistic evidence that may be found.

In all of this discussion, we probably cannot avoid asking ourselves at this point what we see as the next steps for testing. Certain conclusions can now be safely put forward. For the remainder, I will simply offer a few suggestions for activities which may lead at least to a more satisfying if not satisfactory position with regard to testing. The conclusions are basically two:

1. Method of testing is very important. As Bachmann and Palmer (1981) have shown, test performance can be attributable to how we choose to test as well as what we test.

2. No one approach can be expected to serve as a model for all types of testing. In Spolsky's terms (1981), we have proceeded from the "pre-scientific" to the "psychometric structuralist" to the "psycholinguistic-sociolinguistic" phases of language testing. Despite (or perhaps because of) some temporary aberrations, it is now clear that much of what we do in language testing can be boiled down to a constant struggle between the use of those tests which are reliable but raise questions about validity vs. those which prove more valid but fail to yield consistent results.

Amid this sometimes confusing set of circumstances what suggestions can we make as priorities for testing? With our three separate groups in mind I can make the following:

1. We should look more carefully at the students we test. We need to know more about who they are and what *bagage* (as the French say) they bring with them. In par-

ticular, we need to learn from those students who have entered academic programs directly from overseas what role English plays in their day-to-day work here.

2. We must support research which can be translated into terms that are useful to administrators.

3. We must encourage greater links between administrators and field specialists. More regular contacts between ESL and testing specialists and faculty throughout all areas of the university can only help to acquaint the testing specialists with the academic situations our students face and the faculty with the language abilities the students possess.

4. We must examine the tests we use and develop to ascertain their effectiveness from linguistic, psychometric and practical perspectives.

5. We must communicate more regularly with ourselves as field specialists. Those of us who work primarily in language training must enter into dialogue on an equal basis with those who work in testing.

Even part of these suggestions represents a tall order for the future, but without such priorities there may be little hope of taking advantage of our combined strengths. As Stevenson (1981) has said on the subject of language testing and academic accountability, "We are not only accountable to ourselves, but to those who teach and (to those who) are tested."

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